INSTITUTE OF PUBLIC HEALTH

COLLEGE OF MEDICINE AND HEALTH SCIENCES

UNIVERSITY OF GONDAR

Health-Related Quality of Life and Associated Factors among Patients with Diabetes Mellitus in University of Gondar Referral Hospital, Northwest Ethiopia.

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A THESIS SUBMITTED TO INSTITUTE OF PUBLIC HEALTH, COLLEGE OF MEDICINE AND HEALTH SCIENCES, UNIVERSITY OF GONDAR IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE MASTER DEGREE OF PUBLIC HEALTH WITH SPECIALTY IN HEALTH ECONOMICS.

June, 2017

Gondar, Ethiopia

INSTITUTE OF PUBLIC HEALTH

COLLEGE OF MEDICINE AND HEALTH SCIENCES

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EXAMINER

Acknowledgement

I would like to forward my earnest gratitude to my advisors Dr. Mezgebu Yitayal and Mr. Amare Minyihun for their advice and valuable comment. I would like to thank the University of Gondar for giving me this chance to carry out this thesis. I also acknowledge staffs of an institute of public health especially Dr. Telake Azale and Mr. Mekuriaw Alemayhu for their invaluable help and encourage. Last but not least I would like to thank data collectors and participants for their contribution.

Acronyms

ADDQL	Audit of Diabetes Dependent Quality of life
DM	Diabetic Mellitus
EQ 5D	EuroQual 5 Dimension
HRQOL	Health Related Quality of Life
IDF	International Diabetes Federation
OPD	Outpatient Department
QOL	Quality of Life
SF-36	Short Form 36
WHO	World Health Organization
WHOQOL	World Health Organization Quality of Life

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Abstract

Introduction: Diabetes Mellitus is a common and demanding chronic disease that has a wide effect on physical, social and psychological aspects of well-being of a person. However, studies in our country focus on the impact of a disease in terms of mortality and morbidity.

Objective: - The objective of this study was to assess health-related quality of life and associated factors among patients with diabetes mellitus in University of Gondar referral hospital Ethiopia in 2017.

Methods: - A facility based cross-sectional study was conducted in University of Gondar referral hospital from April to May 2017. A total of 416 adult diabetic patients were selected from adult chronic follow up clinic by using systematic random sampling technique. A generic WHOQoL-BREF questionnaire was used to measure quality of life. The data was entered into Epi-info 7 and SPSS version 20 then to Stata version 12 for further analysis. Simple linear regression analysis was done to identify factors associated with each domain of HRQoL independently at a P-value < .2. Multiple Linear Regression analysis with P – value 0.05 was used to measure the degree of association between health-related quality of life and independent variables.

Result: A total of 408 study participants were included in the study. The quality of life score for the physical, psychological, social and environmental domain were 50.9, 54.5, 55.8 and 47.3 respectively. Out of the 4 domain environmental domain had lowest score. Diabetic related complication had a significant association with all domains. Higher quality of life in diabetic patient was associated with exercise and diet. Lower quality of life was associated with presence of comorbidities, age, unemployment and being single.

Conclusion and recommendation: Environmental and physical domains of quality of life score were lowest as compared to social and physical domains of quality of life. There is a need to include health related quality of life assessment as part of patient follow up.

Key word: Health related quality of life, diabetes.

1. Introduction

1.1 Statement of problem

Quality of life (QOL) is an “individual’s perception of their position in life in the context of the culture and value system in which they live and in relation to their goals, expectations, standards, and concerns”(1). Another term Health-Related Quality of Life (HRQoL), can be defined as ‘‘the subjective assessment of the impact of disease and treatment across the physical, psychological and social domains of functioning and well-being’’(2). It is a narrower term that focuses on quality of life related to disease and health. There is a growing consensus that both should be appropriately examined from the patient perspective (3-6).

Diabetes mellitus (DM) is one of the chronic diseases that affect both developed and developing countries. World Health Organization (WHO) reports on diabetes the prevalence increased from 4.7% to 8.5% since 1980 to 2014 and more rapid in middle and low-income countries(7). International diabetic federation (IDF) reported that in 2015 Diabetes affected 415 million peoples worldwide and it will be 642 million in 2040. An estimated 14.2 million adults aged 20-79 have diabetes in the sub-Saharan Africa Region. From the country profile prevalence of DM in Kenya and Sudan is 4% and 6.6% respectively. In Ethiopia, it is 3.8% and one of the four priorities non-communicable disease (8, 9)

Diabetic patients, feel about their blood glucose level; and worry about the complication they might be developing or actually exist. On top of that, quality of life of a diabetic patient is affected by the never ending care and lifestyles adjustments like dietary change and exercise. Diabetes not only affects the patient’s physical, emotional and social wellbeing but also the lives of the people around them(10, 11)

Different studies showed that diabetes affects the patients’ quality of life. The presence of diabetes had an impact on HRQoL and reduced the physical, psychological, environmental and social domains of health (12-15). Studies clearly showed people

with diabetes experienced with significant impairment in their HRQoL than non-diabetes people (16-18).

There are different factors that have an association with HRQoL in diabetic patients. From different studies socio-demographic characteristics such as age, sex, education level, has a significant effect on HRQoL, especially being female is negatively associated with HRQoL in almost all studies. The clinical and lifestyle variables have also an association with HRQoL. The study from Kenya and Serbia found the duration of disease, present of complication and co-morbidity worse HRQoL(12, 14). Being nonsmoker and high physical activity level have the positive association(19).

Diabetes had an impact on individual's health. Health professionals can be identifying the physiological derangement and degree of deteriorations due to diabetes. But individual patients Health perceptions and well-being are not directly proportional to symptoms and functional limitations, which in turn are not directly proportional to physiological and anatomic abnormalities. The effects flowing from biological abnormalities to QOL are mediated and modified by psychological, social and cultural factors(20).

The impact of diabetes on patients can be measured by morbidity, mortality and psychosocial aspect. But most studies in our country focus the impact of diabetes in terms of morbidity and mortality (21-23). So as far as my concern there was no study on the psychosocial impact of diabetes.

Therefore this study aimed to determine the HRQoL of DM patients and to identify factors associate with health-related quality of life.

1.2. Literature Review

1.2.1 Health-related quality of life

Diabetes is a metabolic chronic disease: characterized by high level of blood glucose, that affects the physical, mental and social aspect of daily life of a patient.

The study from Serbia and Tehran revealed that the presence of diabetes has an impact on HRQoL. From the Tehran study with an SF36 range of the mean score of a domain was 46.2 for the general health perceptions to 64.13 for the physical functioning. General health perceptions and mental health have a mean score below the average. Whereas the Serbian study has shown that people with type 2 diabetes have a lower quality of life in all aspects than those without diabetes(12, 13). This was also supported by the study from Spain, Gaza and Nigeria that all domains were strongly reduced in a diabetic patient as compared to non-diabetic or the general population. For instance, a study from Gaza shown all domains were strongly reduced in diabetic patients as compared to non-diabetics, with stronger effects in physical health (36.7 vs. 75.9 points of the 0–100 score) and psychological domains (34.8 vs. 70.0) and weaker effects in social relationships (52.4 vs. 71.4) and environment domains (23.4 vs. 36.2)(16, 17, 24).

The study from Iran shown diabetic patient had a low quality of life as compared to a healthy individual. From the four domains psychological domain was the most affected (scored 53.94) by diabetes(25).
The study from Indian showed 48% had poor quality of life. Social domain had the highest mean score (68.9) and psychological domain had the worst score (49.5) as compared to other domain(26).

The study from Nigeria, Benin City also showed the HRQoL of patients with diabetes was lower. When compared with the control group the HRQoL of patients was lower in all domains. Especially the social domain was affected most. But the environmental domain had a similar score(15).

Another study from Nigeria revealed one of seven patient rated poor overall QOL. From 251 diabetic study participant 20.7%, 65.4% and 13.9% had good, fair and poor score for the overall QOL respectively(27).

The study from Kenya shown diabetes had an effect on the four (physical, psychological, social and environmental) domain of patients' quality of life. The environmental domain had the least (13.66) score by the raw score (4-20) scale(14)

1.2.2 Factors associated with health-related quality of life

1.2.2.1 Socio-demographic variables

Socio-demographic variables have shown a clear effect on HRQOL in all or some domains of the health of a diabetic patient.

A study from Singapore(28) showed that higher household income, being employed, higher educational level and younger age had a positive association with higher quality of life scores, but being females had a lower EQ-5D index score as compared to males. This is also supported by a study from Gaza(17) the impact of diabetes on HRQL was especially severe among females and they had consistently lower HRQoL for all domains than male diabetic patients. From the above studies being female was associated with low HRQoL than male but another study from Nigeria Benin City(15) reviled there was no significant difference in HRQoL between diabetic male and female patients in all the domains. Gaza study with Nigerian study found participants who were 50 years and older had a higher risk of having a lower quality of life compared to those who were younger. Being older than 50 years increased the risk of lower quality of life. From Gaza study Age strongly affected the HRQoL of diabetic patients in physical health and psychological domains. In addition to age Nigerian study found marital status and occupation were the important socio-demographic variables that were linked to the low quality of life.

A study from Uganda found the quality of life was approximately 13% and 18% lower for diabetic patients above 59 years of age when compared to those below 50 years in the

domains of role limitation and physical endurance, respectively. Quality of life was about 16% and 19% higher in the domain of role limitation among patients with secondary and tertiary education, respectively when compared to those with no education. Likewise, quality of life was about 11% and 16% higher among patients with secondary and those with tertiary education in the domain of physical endurance when compared to those with no education (29).

1.2.2.2 Medical /clinical variables

Clinical factories like duration of treatment, type of diabetes, co-morbidities and complication such as neuropathy, retinopathy, nephropaty etc have an association with HRQOL.

A study from Singapore(28) showed factors that had a positive association with higher quality of life scores included: less number of comorbidities and absence of complications including stroke, ischemic heart disease, peripheral neuropathy, eye disease and peripheral vascular disease. Further, a study from Nigeria(30): Compared to participants who did not report any apparent comorbidity, those who reported additional comorbidity had more than 3 times the odds of lower quality of life. But in a contrary another study from Nigeria Benin city (15) shown the presence of complications and other illnesses was not linked to poor HRQoL. A study from Uganda (29) among 219 participants (44.8%) was type 1 diabetic patients. Again (53.9%) reported having diabetic foot ulcers; (33.8%) having retinopathy and hypertension (25.6%). Further, a majority of patients were on oral therapy (66.2%), followed by 36.1% on insulin therapy while the rest were on a combination of the two. But the type of treatment was not significantly associated with the quality of life. The quality of life was about 8% lower in the domain of physical endurance among patients with diabetic foot ulcers when compared to those without the condition. But this had no significant impact on quality of life in the dimension of role limitation.

1.2.2.3 Life-style variables

Life-style factories such as exercise, smoking, alcohol consumption and diet control have an impact on HRQOL.

A study from Nigeria revealed exercise had an association with better physical and overall health. Those who had no or low physical activity level had a reduced quality of life compared to those who are highly activey (24). There were also similar finding from Singapore and Canada, that patients' who performed physical exercise had a high quality of life. But in both study diet hadn't any significant association with quality of life(19, 28).

Interventional study from Sandigo California showed patient with diet with exercise and diet program had improved quality of life(31).

A study from Uganda revealed that smoking were not significant predictors of quality of life of diabetic patients(29).

1.3. Justification of the study

Measurement of HRQL outcome is important to know the impact of a disease in addition to morbidity and mortality. DM has a potential impact on the patients perceived QOL. So far the studies in our country have focused only on mortality and morbidity aspect of diabetes. Nevertheless, DM has an impact on the physical, psychological and social domain of health. Therefore this study was aimed to determine the HRQoL of diabetic patients on the physical, mental, social and environmental aspect. In addition, the finding would also enable health care professionals to obtain a broader picture of the psychological and social impact of DM on patients. This would then offer insights as how to provide care for diabetic patients to improve their HRQoL.

2. Objectives

2.1. General Objective

The general objective of this study was to assess health related quality of life and associated factors among patient with diabetes at University of Gondar referral hospital, Ethiopia in 2017.

2.2. Specific Objectives

- To determine HRQOL among patient with diabetes at University of Gondar referral hospital, Ethiopia in 2017.
- To identify factors associated with HRQOL among patients with diabetes at University of Gondar referral hospital, Ethiopia in 2017.

3. Methods

3.1. Study Design

Institution based cross sectional study designe was employed to assess HRQoL among patients with diabetes.

3.2. Study Area and Study Period

The study was conducted from April to May 2017 at University of Gondar Referral Hospital Gondar town. University of Gondar Referral Hospital is located in North Gondar administrative Zone, Amhara National Regional state. It is 727 Km far from Addis Ababa (the capital city of Ethiopia). Now the hospital is one of a tertiary health care facility in Ethiopia and Amhara regionae and it provides service for North Gondar Zone and peoples of the neighboring zones, West Gojjam, South Gondar and Southern Tigray. It has an outpatient diabetic clinic two days a week with patient flow of around 900 diabetic patients per month. It also has inpatient facilities where medical care is provided throughout the week(33).

3.3. Population

3.3.1. Source of Population

The source population was all adult diabetic patients in University of Gondar referral hospital in 2017.

3.3.2. Study Population

The study population was all adult diabetic patients on outpatient chronic illness follow up clinic during the study period in University of Gondar referral hospital.

3.3.3. Inclusion and Exclusion Criteria

Inclusion criteria

All adult diabetic patients on follow-up for at least six months were included in the study.

Exclusion criteria

Individual with gestational diabetes and patients who is unable to communicate was excluded from the study.

3.4. Sample Size Calculations

The sample size of the study was calculated by using mean estimation of the previous study done in Kenya(14).

- Standard deviation of HRQOL for each domain.
- Confidence level 95%

Table 1.Sample size determination for HRQOoL

	Mean (SD)	Margin of error	Formula	Final sample size with10% NR rate
Physical	14.01 (3.23)	.700	$n=(Z_{\alpha/2})^2\sigma^2/d^2$	91
Psychological	14.58 (2.76)	.729		62
Social	14.75 (3.09)	.737		75
Environmental	13.66 (2.83)	.683		73

For associated factors and for the 2nd objective the sample size was determined using double population proportion formula information obtained from previous study.

Table 2.Sample size determination for factor associated with HRQoL

No	Associated factor	Assumption	Formula	Final sample size
1.	Gender	Power 90%, ratio 1:1, S_1(17.22) S_2(13.79) $\mathcal{E}$ (5.2)(25) 10% non response	$n1=(Z_{\alpha/2} +ZB)^2$ $(S_1^2+ S_2^2) / E^2$	416

The calculated double formula is greater than the single mean formula. Therefore, final sample size of the study was 416.

3.5. Sampling Procedure

The sample population was obtained from the Diabetic clinic at University of Gondar referral hospital. When the patients come for follow up their chart was reviewed for the

inclusion criteria. All adult diabetic patients who started follow up before October 2, 2016 was eligible. Systematic random sampling method was used to recruit Study participant. On average every month around 894 patients come to diabetic outpatient clinic. From this around 65 did not fulfill the inclusion criteria.Thefore the fraction (k) was 2 (829/416). Based on this every two other eligible diabetic patients were selected for the study.

3.6 Variables of the study

3.6.1 Dependent Variable

Health related quality of life

3.6.2 Independent Variables

Socio economic and demographic variable

- ✓ Age
- ✓ Sex
- ✓ Marital status
- ✓ Education
- ✓ Occupation
- ✓ Residency
- ✓ Ethnicity
- ✓ Religion
- ✓ Wealth index

Medical /clinical variable

- ✓ Type of diabetes
- ✓ Duration
- ✓ Type of treatment
- ✓ Fasting blood glucose
- ✓ Body mass index
- ✓ Complication
- ✓ Co morbidity

Life style variables

- ✓ Smoking
- ✓ Physical exercise
- ✓ Diet
- ✓ Foot care

- ✓ Alcohol
- ✓ Adherence

3.7. Operational Definitions

Health related quality of life: The instrument used was the WHOQoL BREF of the WHOQoL-100 scale. This questionnaire contains 26 items computed in to four specific domains namely: Physical, Psychological, Social and Environmental. The mean score of items within each domain was used to calculate the domains score. Higher scores denote higher quality of life, zero score denote low QoL (34).

Body mass index:

BMI was calculated by dividing weight to height square and then categorized into four categories based on WHO classification(35).

<18.5 underweight

18.5-24.9 normal weight

25-29.9 over weight

≥30 obese

Adherence: adherence to medication was classified into high, medium, and low using Morisky Medication Adherence Scales (MMAS-8) (36).

High adherence = 8, Moderate adherence 6 -< 8, Low adherence < 6

Alcohol: alcohol consumption was assessed by using Fast alcohol screening test and categorized in to two category(37)

Non hazardous drinker < 3 and Hazardous drinker ≥ 3

Diabetic self care activity: this tool assess the number of days per week on a scale of 0-7 the patient perform the recommended self care acivities (38).

Genenal diet = Mean number of days the patient follow the recommended diet plan

Specific diet = Mean number of days the patient eat fruits and fatty foods.

Exercise = Mean number of days the patient perform a minimum of 30 minutes activity

Foot care = Mean number of days the patient take care of their foot and check the inner of their shoes.

Smoking status = (1= smoker 2= non smoker)

3.8. Data Collection Tools and Procedures

3.8.1. Data collection tools

World Health Organization Quality of Life Questionnaire – short version (WHOQOL-BREF) with 26 items was used to assess the health-related quality of life. The instrument has four domain scores denoting an individual's perception of quality of life; each domain, physical (7 items), psychological (6 items), social (3 items) and environmental (8 items) were assessed through a set of 24 items. The rest two items measured the overall perception of quality of life and satisfaction with the health status. Responses to the questions were a 5-point Likert scale, inquiring how much, how satisfied or how completely the respondent felt in relation to the domain being investigated. The WHOQoL-Bref Questionnaire was administered by the interviewer.The tool also comprises socio- economic and demographic, clinical and lifestyle variables to collect information from the patients. Some clinical data (comorbidites, complication, diabetes type and fasting blood sugar) was collected from the chart. Ten nurses with two supervisors were assigned for data collection from April to May 2017.

3.8.2. Data quality control issues

The question was first adopted from WHO web address in the English language then translated to Amharic and back translated into English to keep its consistency. The Pretest was conducted on 20 patients before one week of data collection in the University of Gondar Referral hospital. One-day training was given for 10 data collectors and 2 supervisors on how to collect data. The collected data was checked by the supervisor and principal investigator for its completeness.

3.9. Data processing and Analysis

The collected data were checked for its completeness, given the code, entered into Epi-Info version 7 Software and exported SPSS Version 20 and then to Stata version 12 for further analysis. Reliability test (Cronbach alpha) was performed to check the reliability of the questionnaire items and domains. Negatively framed questions were transformed to positively framed questions. Raw and transformed score were done for the outcome variables. Summary statistics was done for the outcome and independent variables. Model assumption (normality, equal variance, Multicollinearity, and linearity) was checked. Simple linear regression analysis was done to identify factors associated with each domain of HRQoL independently at a P-value < .2. Variables which were significant at a p-value of <0.2 were selected for the final model multiple linear regression analysis. In multiple linear regression analysis variables with a P-value of <0.05 was considered statistically significant.

3.10 Ethical Considerations

Ethical clearance was obtained from the Ethical Review Board of an Institution of Public Health, College of Medicine and Health Science, and the University of Gondar. Official letter was given to University of Gondar Referral hospital clinical director and chronic illness outpatient department (OPD) clinic head. The purpose and importance of this study were explained for each participant. Verbal informed consent was taken from each study participant before they interviewed and participants' involvement was based on a voluntary basis. Participants who were unwilling to participate and want to abstain at any step of an interview in the study are informed to do so without any restriction. Confidentiality of the data was kept at all level of the study.

4. Result

4.1 Sociodemographic and economic characteristics of respondents

In this study, a total of 408 diabetic patients participated with the 98.08% response rate. This study reported (54.7%) male, 59.1% married, 25.2% housewives 33.7% unable to read and write, 69.9% urban residents, and 34% poor among respondents. The mean age (SD) of the participant was 47.48 (14.9) years (Table 3).

Table 3.Demographic and socio-economic characteristics of study participants at University of Gondar referral hospital, North West Ethiopia, 2017(n=408)

Variable	Description	Frequency (%)	Mean ± SD
Sex	Male	223 (54.7%)	
	Female	185 (45.3%)	
Age			47.48 **±** 14.9
Religion	Orthodox	350 (85.8%)	
	Muslim	55 (13.5%)	
	Protestant	3 (.7%)	
Marital status	Single	60 (14.7%)	
	Married	241 (59.1%)	
	Windowed	54 (13.2%)	
	Divorced	53 (13.0%)	
Occupation	Unemployed	19(4.7%)	
	Farmer	92(22.5%)	
	Retired	25(6.1%)	
	Private employee	42(10.3%)	
	Government employee	50(12.3%)	
	Merchant	41(10.0%)	
	Daily laboraer	19 (4.7%)	
	Housewife	103(25.2%)	
	Student	17 (4.2%)	
Educational status	Unable to read and write	137 (33.7%)	

	Primary education	154 (37.7%)
	Secondary education	34 (8.3%)
	Above Secondary	83 (20.3%)
Residence	Urban	285 (69.9%)
	Rural	123 (30.1%)
Ethnicity	Amhara	361 (88.5%)
	Kimant	33 (8.1%)
	Tigray	11 (2.7%)
	Other	3 (.7%)
Wealth quintile	Poor(1st quintile)	138 (33.82%)
	Medium(2nd quintile)	138 (33.82%)
	Rich(3rd quintile)	132 (32.36 %)

4.2 Clinical/ Medical characteristics of respondents

From the participants, (56.6%) were type 2 diabetes, (28.9%) had other comorbidities other than diabetes and, (21.6) developed a diabetes-related complication. The median duration of diabetes was 6 (IQR = 7) years.

Table 4.Medical characteristics of study participants at University of Gondar referral hospital, North West Ethiopia, 2017(n=408)

Variable	Description	Frequency (%)	Median(IQR)
Diabetes type	Type 1	177 (43.4 %)	
	Type 2	231(56.6%)	
Duration of Diagnosis	Duration in years		6 (7)
Fasting blood sugar	<140	135 (33.1%)	
	≥140	273 (66.9%)	
Type of treatmen	Oral medication	143 (35.0%)	
	Injection	233 (57.2%)	
	Both	32 (7.8 %)	
Other comorbidities	Present	118 (28.92 %)	
	Absent	290 (71.08%)	
Comorbidities	Asthma	14 (11.86 %)	
	Hypertension	86 (72.88 %)	
	HIV	11 (9.32 %)	
	Hypertension & asthma	7 (5.93 %)	
Complication	Present	88 (21.57%)	
	Absent	320 (78.43%)	
List of complication	Nephropathy	21 (23.86 %)	
	Neuropathy	35 (39.77%)	
	Retinopaty	32 (36.36%)	
BMI	Under weight	26 (6.37 %)	
	Normal weight	241 (59.07%)	
	Over weight	108 (26.47%)	
	Obese	33 (8.09%)	

IQR = Inter Quartile Range, BMI= Body Mass Index

4.3 Life style/ Behavioral characteristics of respondents

In this study, (52.94 %) of diabetic patients drank alcohol for the last three months and from this (18.1%) were hazardous drinkers and (4.2%) were smokers. Regarding medication adherence, (43.14 %) were high adherence to medication (Table 5).

Table 5.Behavioral characteristics of study participants atUniversity of Gondar referral hospital, North West Ethiopia, 2017(n=408)

Variable	Frequency (%)	Mean± SD
Alcohol		
Hazardous drinker	39 (18.1 %)	
Sensible drinker	177 (81.9 %)	
General diet		2.75 (1.99)
Specific diet		3.31 (1.01)
Exercise		2.07 (1.75)
Foot care		4.27 (2.07)
Smoking		
Smoker	17 (4.2%)	
Non smoker	391 (95.8%)	
Medication adherence		
Low adherence	75 (18.38 %)	
Medium adherence	157 (38.48 %)	
High adherence	176 (43.14 %)	

SD= standare deviation

4.4 Health related quality of life

Health-related quality of life was assessed by WHO-QoL Bref questionnaire. The tool has 26 items and internal reliability (measured by Cronbach Alpha) was $\alpha = 0.87$. Two items measure the over all perception of quality of life and health status. In this study (41.91%) of the participants rated their quality of life as good and 18.14% of patients were satisfied with their current health status (Table 6).

Table 6. Self rating of HRQoL and Health satisfaction of the participants

Self rating of QoL			Satisfaction with health status		
Response	**Frequency**	**Percent**	**Response**	**Frequency**	**Percent**
Very poor	5	1.23%	Very dissatisfied	13	3.19%
Poor	89	21.81%	Dissatisfied	86	21.08%
Neither poor nor good	137	33.58%	Neither satisfied nor dissatisfied	226	55.39%
Good	171	41.91%	Satisfied	74	18.14%
Very good	6	1.47%	Very satisfied	9	2.21%
Total	408	100.0	Total	408	100.0

The four domains had good internal reliability with Cronbach Alpha physical α = .77, psychological α = .69, social α = .73 and environmental α = .71. Among the 4 domains, the environmental domain had lowest mean score 47.31. In contrast, the social domain of quality of life had the highest score (Table 7).

Table 7HRQoL Domain score of study participants at University of Gondar referral hospital, North West Ethiopia, 2017(n=408)

Domains	N	Mean± SD	95% confidenc interval
Physical	408	50.97±13.89	49.62 - 52.32
Psychological	408	54.55±13.36	53.25 - 55.85
Social	408	55.88±17.63	54.16 - 57.59
Environmental	408	47.31±12.51	46.10 - 48.53

SD= Standare Deviation

4.5 Factors Associated with HRQoL

In this study, some of sociodemographic, clinical and lifestyle variable had a significant association with each domain of quality of life at a p-value of 0.05.

Age, other comorbidities, diabetes-related complication and exercise were significantly associated with the Physical domain of quality of life.

As the Age of the patient increased by one year the physical domain of quality of life was decreased by 0.131 scores (95% CI = -2.4, -0.1). Compared to a patient with other comorbidities and diabetes-related complication; patients without comorbidities and diabetes-related complication had increased the physical domain of quality of life by 5.1 and 5.07 score respectively. As the number of the day for exercise increased by one-day physical domain of Quality of life was increased by 1.21 scores (95% CI =.38, 2.04) other conditions being held constant (Table 8).

Regarding psychological domain of quality of life age, marital status, occupation, comorbidities, diabetes-related complication, foot care and exercise were significantly associated with the psychological domain of quality of life at a p-value ≤ .05 (Table 8).

As the age of the patient increased by one-year psychological domain of quality of life was decreased by 0.124 scores (95% CI = -.23, -.16**)** other conditions being held constant. Compared to married patient those single or unmarried patients had a reduced psychological domain of quality of life by 4.4 score (95% CI = -8.56, -.25) other conditions being held constant.The occupation had an association with the psychological domain and unemployed and private employee diabetic patients had a decreased psychological domain of quality of life with 8.46 (95% CI = -15.34,-1.58**)** and 5.83 (95% CI = -11.30, -.37**)** respectively as compared to a government employee. When we see a patient with other comorbidities and diabetes-related complication; patients without comorbidities and diabetes-related complication had increased psychological domain of quality of life (Table 8). As the number of the day for exercise and foot care increased by one-day psychological domain of Quality of life was increased by 1.5 scores (95% CI =.757, 2.33) other conditions being held constant.

Age, marital status, and diabetes-related complication had a significant association with the social domain of quality of life. As the age of the patient increased by one-year social domain of quality of life was decreased by 0.195 scores (95% CI = -.351**,** -.040). Compared to married patient those single or unmarried patients had a reduced social domain of quality of life by 7.14 score (95% CI = -12.99**,** -1.29). Compared to a patient with complication patient without complication had increase social domain of quality of life by 8.52 score (95% CI = 4.02, 13.03).

Being single and divorced/widowed had a reduced environmental domain of quality of life with (ß = -4.48, 95% CI = -8.15, -.82) and (ß = -2.79, 95% CI = -5.40, -.18) as compared to married participants. As well as unemployed and a daily laborer had a reduced environmental domain of quality of life by 6.44 scores (95% CI = -12.56, -.33) and 6.44 (95% CI = -12.56, -.33) as compared to a government employee. Regarding residency living in the rural area reduced the environmental domain of quality of life by 4.37 scores (95% CI = -8.13, -.61) compared to living in urban area. Compare to a patient with complication patient without complication had increased environmental domain of quality of life by 3.80 scores (95% CI = .97, 6.64). As the number of the day for general diet and foot care increased by one-day environmental l domain of Quality of life were increased by 1.58 and 1.22 scores respectively with (95% CI =.94, 2.23 and .67, 1.76).

Table 8. Multiple linear regression analysis between the four domains of HRQoL and independent variables.

Variables	**Physical**		**Psychological**		**Social**		**Environmental**	
	ß	**95% CI**	**ß**	**95% CI**	**ß**	**95% CI**	**ß**	**95% CI**
Sex								
Male	-	-	-	-	-	-	-	-
Female	.78	-2.7, 4.2	-2.28	-5.60, 1.03	0.17	-4.58, 4.92	1.88	-1.06, 4.83
Age	-.13	-2.4, -0.1*****	-.12	-.23, -.16*****	-.19	-.35, -.04*****	-.07	-.16, .01
Marital status								
Married	-	-	-	-	-	-	-	-
Divorce/widowed	-2.4	-5.5, .65	-1.45	-4.37, 1.46	-1.36	-5.49, 2.76	-2.79	-5.40, -.18*****
Single	.96	-3.4, 5.3	-4.40	-8.56, -.25*****	-7.14	-12.99, -1.29*****	-4.48	-8.15, -.82*****

Occupation								
GE	-	-	-	-	-	-	-	-
Unemployed	-6.9	-14.1,.32	-8.46	-15.34,-1.58*****	-6.24	-16.23, 3.74	-6.44	-12.56, -.33*****
Farmer	.44	-6.03,6.92	1.21	-3.04, 5.44	-3.94	-13.19,5.31	-1.56	-7.05,3.91
Retired	2.5	--3.67,8.80	.57	-5.34,6.48	-5.09	-13.84,3.65	1.77	-3.52,7.07
PE	-4.2	-10.0,1.5	-5.83	-11.30, -.37*****	-6.67	-14.84, 1.49	-2.62	-7.54, 2.29
Merchant	3.45	-2.51,9.42	.96	-4.69,6.62	-4.22	-12.6,4.16	-.88	-5.98,4.20
Daily laborer	-3.6	-11.2, 3.9	-7.20	-14.48, -.06	-10.18	-20.76, .39	-9.21	-15.57,-2.85******
Housewife	-2.0	-7.96,3.85	-2.74	-8.35,2.84	-2.94	--11.24,5.35	-3.37	-8.40,1.65
Student	2.46	-5.09,10.3	-1.53	-8.86,5.80	-2.03	-12.60,8.53	-.47	-7.08,6.12
Residency								
Urban	-	-	-	-	-	-	-	-
Rural	-.88	-5.3, 3.5	.104	-4.09, 4.30	-4.31	-	-4.37	-8.13, -.61*****
Comorbidities								
Yes	-	-	-	-	-	-	-	-
No	5.1	2.13,8.17******	3.61	.754, 6.47*****	2.68	-1.36, 6.73	-	-
DRC								
Yes	-	-	-	-	-	-	-	-
No	5.0	1.70,8.45******	5.81	2.62,9.01*******	8.52	4.02, 13.03*****	3.80	.97, 6.64******
Exercise	1.21	.38,2.04******	1.54	.757,2.33*******	0.56	-.53, 1.66	-	-
General diet	.74	-.07, 1.55	.44	-.32, 1.21	0.40	-.65, 1.46	1.58	.94, 2.23*******
Foot care	-.45	-1.12, .20	.89	.26, 1.52******	-	-	1.22	.67, 1.76*******

Note: GE=government employee, PE= private employee, DRC= Diabetic related complication, * variables significant with p-value ≤ 0.01, ** variables significant with p-value ≤ 0.05, ***Variables significant with p-value ≤ 0.0001

5. Discussion

This study was done among patients with diabetes in University of Gondar Referral hospital.The study showed that diabetic patienst had lowest score for environment domain of quality of life and highest for the social domain. Age, marital status, and diabetic related complication had a significant association with at least three domains of quality of life.

The present study found that patients had lowest score 47.31±12.51 out of 100 in the environmental domain compared to any other domains. This implies that relatively patients didn't have enough money to meet their needs, low information access for their daily life and dissatisfied with their access to the health facility, transportation and recreation. Moreover, more than 30% of the patients come from the rural area. Even some urban dwellers came from other urban areas for their diabetes follow up. These might be the reasons for the low score of the environmental domain of the patients' quality of life.

The lowest score 50.97±13.89 out of 100 observed in the physical domain indicating the patients' daily life depends on the medication, dissatisfied with the sleep and capacity for work.

The social domain had highest score 55.88±17.63 out of 100 relative to other domains.This implies patients were satisfied with their sexual life, personal relationship and the support they got from relatives or friends.

Finally, the psychological domain had a score of 54.55±13.36 out of 100. The life style modification of diabetes treatment such as diet and exercise may affect the patient's extent of enjoyment. The patient may have a negative feeling due to the complications that had or might be developed and low feeling about themselves. All these might have affected the psychological domain.

The present study showed the environmental domain had the lowest score, whereas the social domain had the highest score. The present study is inline with the Kenya study

(14) with the sequence of the domains' affected by diabetes. But a direct comparison of the score is difficult because mean scores were a raw score from 0 to 20.

In this study, the quality of life score is higher than the study from Benin, Nigeria (15) and Palestine,Gaza (17) in respect to all domains of quality of life. These two studies were cross-sectional studies and used a similar tool with the present study. The Possible explanation is differences in psycho-social, cultural, economic, and environmental makeup. For instance, the study participants in the present study live in a stable environment and relatively have their own living facility and access to the health facility and other infrastructures as compared to patients from Gaza who were from refugee camps.

As compared to the present study, a study from Iran with WHOQoL bref (25) shows the quality of life scores for psychological (53.9) and social (54.6) were inline with the present study. But the environmental domain score 47.3 (95% CI = 46.1, 48.5) and physical domain 50.9 (95% CI= 49.6, 52.3) scores are lower than the Iran 56.4 and 54.6. A possible explanation is different in economic status, satisfaction with the infrastructure and health care service and clinical characteristics of the patient.

This finding shows the physical, psychological and social aspects of quality of life are lower than the study from India (Delhi) (39) 65.4, 58.6 and 69.0 respectively with SF-36. Eventhouth, this was not strict comparison the difference might be the tool difference. For instance, WHOQoL physical domain assesses the patients' level of dependency on drug, capacity and satisfaction with daily work, effect of pain on daily activities and extent of mobility. But physical domain of SF-36 assesses only limitation on physical activities from vigorous to lower activities. Tehran study(13) was also measured by SF-36 and scores are higher than this study respect to physical and social domains.

In this study, age had a significant association with all domains of quality of life except environmental domain. This is inline to the studies from Kenya and Singapore(14, 28). This can be explained by the fact that age is related to several changes in the body and increased the risk of developing comorbid diseases. The American Diabetes Association (40) also showed the aging process leads to a degeneration of muscles,

ligaments, bones, and joints, and disuse and diabetes may exacerbate the problem. All these might affect the physical, psychological and social domains of quality of life.

This study, showed that patients without comorbidities had a better quality of life (ß = 5.1, 95% CI = 2.13, 8.17, ß = 3.16, 95% CI = .75, 6.47) in respect to the Physical and psychological domains than patients with comorbidities. This is supported by studies from Nigeria and Singapore (24, 28).

Marital status had a significant association with all domains except physical domain. Those who were single were more likely to have poorer quality of life compared to the married ones. This was supported by a study from Nigeria that compared to a married single had 1.7 times (95% CI = 1.1, 2.6) the odds of lower quality of life (24). This might be due to differences in getting social support as married one might have the better probability of getting social support from their relatives.

In this study, a diabetic related complication had a significant association with all domains. Patients without complication had better quality of life in all domains of quality of life. This study is inline to studies from Palestine,Gaza and Singapore(17, 28) that patients with diabetic related complications had a reduced quality of life.

From the lifestyle factors, exercise had a significant association with all domains except social domain. General diet had also a significant association with the environmental domain. An interventional study from Sandiego California (31) showed that exercise and diet had a positive impact on quality of life. Studies from Nigeria and Canada (19, 24) were also in line with this finding.

Compared to urban dwellers rural dwellers had a lower quality of life on the environmental domain by 4.37 score with (95% CI = -8.13,-.61). Although, studies comparing residence with quality of life among patients with diabetes mellitus are unavailable, there are clear differences with respect to access to health service, information and education level between rural and urban settings. All these can affect quality of life.

Regarding foot care as the number of days increased for foot care the psychological and environmental domains of quality of life also increase. A study from United Kingdom (41) showed that psychological domain was affected due to individuals with foot ulcer and reported emotions of frustration, anger and anxiety about the ulcers and the threat of amputations. A study from Uganda(29) also revealed patients with foot ulcer had a low quality of life. Therefore, foot care is a good starting to prevent foot ulcer and improve the quality of life. So, foot care increases the patient's sense of physical safety, enable to participate for recreation and avoid long-treatment and hospitalization. These further improve the patent's environmental domain of quality of life.

6. Limitation of the study

This study was a cross-sectional study which was only able to detect the association, but not causality. In addition, some important variable like lipid profile and HgA1c wasn't measured and the study was on one setting and not representative of the diabetes patient to another setting.

7. CONCLUSION

Environmental and physical domains of quality of life were lowest as compared to social and physical domains of quality of life. Diabetes related complication, age (become older), being single were significantly associated with lower quality of life for most of the domains. Whereas exercise and foot care were significantly associated with better quality of life of DM patients for some of domains.

8. Recommendations

To research community: a further study by another method like longitudinal study design.

To health professional: QOL evaluation shall form part of the integral management and identify and stressed on advice on exercise, foot care and prevention of diabetes related complication for the patients.

For hospital's clinical director form multidisciplinary teams such as Physicians, Nutritionist and social worker to educate and empower the patient.

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10. Annex

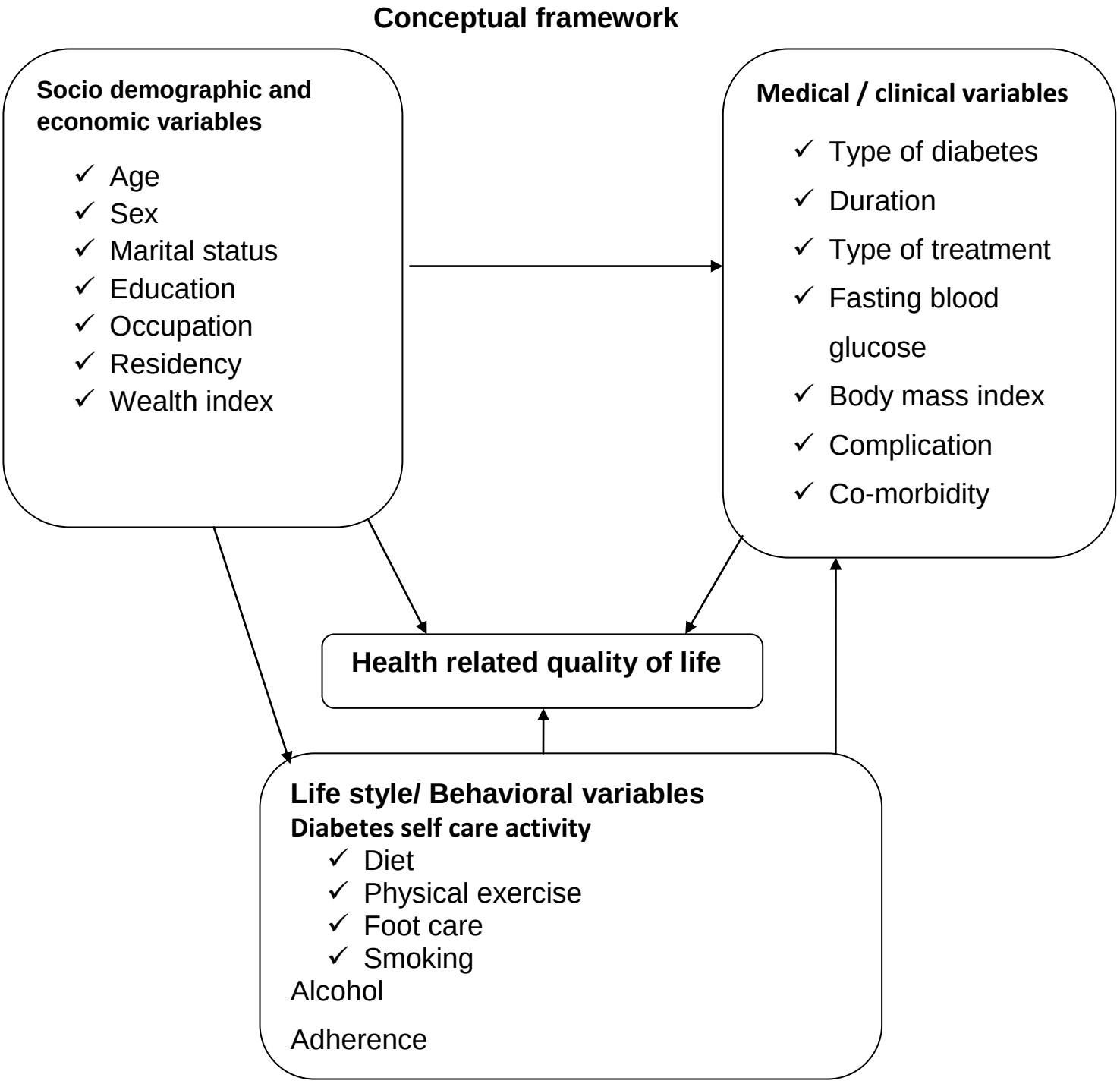

Figure1. Conceptual framework for factors associated with HRQL in diabetes mellitus from different literatures (19, 28, 29, 42-44)

10.1 Information sheet

Research Project: Health related quality of life and associated factors among patients with diabetes in University of Gondar referral hospital, Ethiopia in 2017.

Name of Principal investigator: Andualem Yalew

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Name of the organization: University of Gondar

Name of the Sponsor: University of Gondar

Introduction

These information sheet and consent forms are prepared to explain the study to you who are being asked to join. This study is done in University of Gondar referral hospital on health- related quality of life and associated factors among patients with diabetes. Please listen carefully and ask any questions about the study before you agree to join. The investigator includes final year health economics master's graduate student from the Institute of public health, college of medicine and health science, university of Gondar, and two advisors Dr. Mezgebu Yitayal and Amare Minyihun from the university of Gondar.

Purpose of Research Project: The purpose of this study is to assess health -related quality of life and associated factors among patients with diabetes on outpatient follow-up clinic in University of Gondar referral hospital. The study will be helpful in determining the HRQOL and identifying major determinant factors. This will help for designing appropriate and timely intervention and guide decision making. Furthermore, it can be used as a baseline for further study.

Procedure: In order to assess health related quality of life and associated factors among patients with diabetic, we invite you to take part in this project. If you are willing to participate in this project, you need to understand and sign the agreement form. Then after, you will be interviewed by the data collector to give your response and some measurements.

Risk/ Discomfort: By participating in this research project you will not encounter any harm or discomfort. But we may waste about 20 minutes for data collection. We thought the study finding will be better than the time you wasted. We hope you will participate in the study for the sake of the benefit of the research result. There is no risk in participating in this research project.

Benefits: If you participate in this research project, there may not be a direct benefit to you but your participation is likely to help us in assessing health related quality of life and associated factors that influence your health related quality of life. Furthermore, the information obtained from you will be used for planning and implementing strategies to improve the quality of life in diabetic patients. However, you will not be provided any incentives or payment to take part in this project.

Confidentiality: The information collected from this research project will be kept confidential and Information collected about you will be stored in a file which will not have your name on it but a code number assigned to it and will be kept in a locked cabinet so that no one except the investigator will have access to it.

Right to refuse or withdraw: You have full right to refuse from participating in this research. You can choose not to respond to some or all of the questions if you do not want to give your response. You have also the full right to withdraw from this study at any time you wish, without any penalty.

Persons to contact: If you have any question, please contact the following person.

1. Andualem Yalew: Institute of Public health, college of Medicine and Health Sciences, University of Gondar

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10.2 Consent form

A questionnaire prepared to assess the health related quality of life and associated factors among patients with diabetes in University of Gondar referral hospital, Ethiopia in 2017.

Introduction and Consent form

Dear participant; my name is _____. I am working for the University of Gondar .here I am coming as a member of University of Gondar institute of public health.

The purpose of this questionnaire is to gather information on the health related quality of life and associated factors among patient with diabetes. The research will be beneficial for the participants for the future better management of diabetes and improve the quality of life. The results of the study will be used as a base line to improve health related quality of life. We will ask you a series of questions which will take about 20 minutes and then there will be measurements on your weight and height. Your willingness to answer all of the questions would be appreciated. Your genuine response to these questions will help for the correct findings of the study. Your answers will be kept confidential and we will not write your name in the questionnaire. You have a right not to respond to any of the questions and you can interrupt at any point during interview. If you have any question, don't hesitate to ask the interviewer.

Would you agree to participate in the study?

Yes _____ No____

Thank you for being voluntary to participate in the study!

Name and Signature of the data collector _____

Date of interview_____

10.3 English version questionnaire

Questionnaire

Questionnaire No_____ MRN number_____

PART 1- INDIVIDUAL (SOCIO-DEMOGRAPHIC) CHARACTERISTICS

No	QUESTIONS	Responses	Remark
1	sex	1. Male 2. Female	
2	Age	_____years	
3	Religion	1. Orthodox Christian 2. Muslim 3. Protestant 4. Catholic 5. Other (specify)_____	
4	Marital Status	1. Married 2. Divorced 3. separated 4.Single 5.Widowed	
5	Occupation	1.Unemployed 2. Farmer 3.Retired 4. Private employee 5. Government employee 6. Merchant 7. Daily laboraer 8. Housewife 9. Other(specify)_____	
6	Residence	1. Urban 2. Rural	
7	Educational status	1. Unable to read and write 2. Only read and write 3. Grade1-8 4. Grade 9-10 5. Grade 11-12 6. College and University	

		7. Other(specify)_____	
8.	Ethnicity	1.Amhara 2. Kimant 2.Tigray 3.Oromo 4.other (specify)----------	

PART 2: Medical/clinical variable

No	QUESTIONS	Responses	Remark
1	Duration since you know your diabetes statuse?	_____	
2	Type of treatment	1. Oral medication 2. Injection 3. Both 4. I don't take anything	
3	Do you have other chronic disease	1.yes 2. No	
4	If you say yes for question three specify each	_____	
5	Weight	_____k.g	
6	Height	_____ c.m	
7	BMI	_____ k.g/c.m^2	
	Information from chart		
8	Diabetes type	1. Type 1 2. Type 2	
9	Current Fasting blood glucose	_____mg/dl	
10	Diabetes related complication (specify each complication)	1. Yes (specify) _____ 2. No	

Part 3: Health related quality of life variables

The following questions ask how you feel about your quality of life, health, or other areas of your life. I will read out each question to you, along with the response options. **Please choose the answer that appears most appropriate.** If you are unsure about which response to give to a question, the first response you think of is often the best one.
Please keep in mind your standards, hopes, pleasures and concerns. We ask that you think about your life **in the last four weeks.**

		Very poor	Poor	Neither poor nor good	Good	Very good
1.	How would you rate your quality of life?	1	2	3	4	5

		Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
2.	How satisfied are you with your health?	1	2	3	4	5

		Not at all	A little	A moderate amount	Very much	An extreme amount
3.	To what extent do you feel that physical pain prevents you from doing what you need to do?	5	4	3	2	1
4.	How much do you need any medical treatment to function in your daily life?	5	4	3	2	1
5.	How much do you enjoy life?	1	2	3	4	5
6.	To what extent do you feel your life to be meaningful?	1	2	3	4	5

		Not at all	A little	A moderate amount	Very much	Extremely
7.	How well are you able to concentrate?	1	2	3	4	5
8.	How safe do you feel in your daily life?	1	2	3	4	5
9.	How healthy is your physical environment?	1	2	3	4	5

		Not at all	A little	Moderately	Mostly	Completely
10.	Do you have enough energy for everyday life?	1	2	3	4	5
11.	Are you able to accept your bodily appearance?	1	2	3	4	5
12.	Have you enough money to meet your needs?	1	2	3	4	5
13.	How available to you is the information that you need in your day-to-day life?	1	2	3	4	5
14.	To what extent do you have the opportunity for leisure activities?	1	2	3	4	5

		Very poor	Poor	Neither poor nor good	Good	Very good
15.	How well are you able to get around?	1	2	3	4	5

		Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
16.	How satisfied are you with your sleep?	1	2	3	4	5
17.	How satisfied are you with your ability to perform your daily living activities?	1	2	3	4	5
18.	How satisfied are you with your capacity for work?	1	2	3	4	5
19.	How satisfied are you with yourself?	1	2	3	4	5
20	How satisfied are you with your personal relationships	1	2	3	4	5
21.	How satisfied are you with your sex life?	1	2	3	4	5
22.	How satisfied are you with the support you get from your friends?	1	2	3	4	5
23.	How satisfied are you with the conditions of your living place?	1	2	3	4	5
24.	How satisfied are you with your access to health services?	1	2	3	4	5
25.	How satisfied are you with your transport?	1	2	3	4	5

		Never	Seldom	Quite often	Very often	Always
26.	How often do you have negative feelings such as blue mood, despair, anxiety, depression?	5	4	3	2	1

Part 4: life style (behavioral) variables

The Summary of Diabetes Self-Care Activities

The questions below ask you about your diabetes self-care activities during the past 7 days. If you were sick during the past 7 days, please think back to the last 7 days that you were not sick.

Diet

1. How many of the last **seven days** have you followed a healthful eating plan?
☐0 ☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7
2. On average, over the past month, how many **days per week** have you followed your eating plan?
☐0 ☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7
3. On how many of the last **seven days** did you eat five or more servings of fruits and vegetables?
☐0 ☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7
4. On how many of the last **seven days** did you eat high fat foods such as fatty meat or full-fat dairy products?
☐0 ☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7

Exercise

5. On how many of the last **seven days** did you participate in at least 30 minutes of physical activity? (Total minutes of continuous activity, including walking).
☐0 ☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7
6. On how many of the last **seven days** did you participate in a specific exercise session (such as swimming, walking, biking) other than what you do around the house or as part of your work?
☐0 ☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7

Foot Care

7. On how many of the last **seven days** did you check your feet?
☐0 ☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7
8. On how many of the last **seven days** did you inspect the inside of your shoes?
☐0 ☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7

Smoking

9. Have you smoked a cigarette - even one puff - during the past **seven days**?
1. ☐Yes 2.☐No

Alcohol

Key

1 bottle beer = 1.7 unit

1bottle wine = 9.0 unit

1 drink areki = 1 unit

1 sprit whisky = 1 unit

1 can tella = 4.6 unit

1 glass of wine = 2.2 unit

1 birle tej = 3 unit

1 janbo drafut =1.7 unit

For the following questions please circle the answer which best applies to your drinking in the last 3 month.

11	Did you drink alcohol for the last months 1. Yes 2. No If say yes what type of drink did you use more_____					
	If you circle answer 0,3 and 4 for question number 12 don't go to question 13, 14, and 15					
		Never	Less than Monthly	monthly	Weekly	Daily or almost daily
12	**MEN**: How often do you have EIGHT or more drinks on one occasion? **WOMEN**: How often do you have SIX or more drinks on one occasion?	0	1	2	3	4
13	How often during the last year have you been unable to remember what happened the night before because you had been drinking?	0	1	2	3	4
14	How often during the last year	0	1	2	3	

	have you failed to do what was normally expected of you because of drinking?					4
15	In the last year has a relative or friend, or a doctor or other health worker been concerned about your drinking or suggested you cut down?	No		Yes, but not in the Last year		Yes, during The last year

Morisky medication adherence scale questions

16	Do you sometimes forget to take your medication?	1. Yes 2. No	
17	People sometimes miss taking their medications for reasons other than forgetting. Thinking over the past two weeks, were there any days when you did not take your medicine?	1. Yes 2. No	
18	Have you ever cut back or stopped taking your medicine without telling your doctor because you felt worse when you took it?	1. Yes 2. No	
19	When you travel or leave home, do you sometimes forget to bring along your medicine?	1. Yes 2. No	
20	Did you take all your diabetes medicine yesterday?	1. Yes 2. No	
21	When you feel like your symptoms are under control, do you sometimes stop taking your medicine?	1. Yes 2. No	
22	Taking medicine every day is a real inconvenience for some people. Do you ever feel hassled about sticking to your treatment plan?	1. Yes 2. No	
23	How often do you have difficulty remembering to take all your medicine?	ely . while es ıe	

Part 5.Family related income and wealth index related questions			
For those who come from urban			
		Response	
1.	Owner ship of the house	1. Private 2. Kebele 3. Rented from individual 4. Others specify--------	
2.	Main material of the dwelling floor	1. Earth / Sand 2. Dung 3. Cement 4. Ceramic	

		5. Others specify--------	
3.	Main material of the roof	1. Metal/Tin 2. Wood 3. Others specify ----------	
4.	Main material of the exterior walls	1. Stone with mud 2. Wood with mud 3. Stone/brick with cement 4. Others specify ----------	
5.	Number of rooms used for sleeping	_____in number	
6.	Type of fuel mainly used for household cooking	1. Electricity 2. Charcoal 3. Kerosine 4. Wood 5. Animal dung 6. Others specify ----------	
7.	Type of latrine used	1. Flush/Pour flush toilet household 2. Ventilated improved pit latrine (VIP) 3. Tradationl pit latrine 4. Commone latrine 5. Filed 6. Others specify ----------	
8	Do you have kitchine room?	1. Yes 2. No	
9.	What is the main source of water for the house?	1. Piped into residence 2. Commone pipe water 3. Public well 4. Well/borehole with pump in the compound 5. Rain water 6. Well/borehole without pump in the compound 7. Pond/River/Stream/Dam 8. From spring 9. Others specify ----------	
10.	Does the following things availabl at your home?		If say yes mention the number
	A Raido	1. Yes 2. No	
	A Television?	1. Yes 2. No	
	A home telephone?	1. Yes 2. No	
	A Refrigerator?	1. Yes 2. No	
	Bed/ Cotton/sponge/spring mattress	1. Yes 2. No	
	A Table?	1. Yes 2. No	
	A chair?	1. Yes 2. No	
11.	Does any one have the following things in your home?		
	A Mobile phone	1. Yes 2. No	
	If you say yes what type of phone do you	1. Smart phone 2. Other	

	have?		
	A moterbicycle?	1. Yes 2. No	
	Bajaj	1. Yes 2. No	
	Cart	1. Yes 2. No	
	car	1. Yes 2. No	
12.	Does the following animal availabl at your home?		If say yes mention the number
	Ox/caw	1. Yes 2. No	
	Horse, Donkey, Mules	1. Yes 2. No	
	Goat	1. Yes 2. No	
	Sheep	1. Yes 2. No	
	Hen	1. Yes 2. No	
	Beehives	1. Yes 2. No	
13.	Does any member of the family have a bank account	1. Yes 2. No	

For those who come from rular

1.	Owner ship of the house	1. Private 2. Others specify--------	
2.	Main material of the roof	1. Metal/Tin 2. Wood 3. Others specify ----------	
3	Main material of the exterior walls	1. Stone with mud 2. Wood with mud 3. Stone/brick with cement 4. Others specify ----------	
4	Type of fuel mainly used for household cooking	7. Electricity 8. Charcoal 9. Kerosine 10. Wood 11. Animal dung 12. Others specify ----------	
5.	Do you have kitchine room?	2. Yes 2. No	
6.	Do you have separate rooms for animals?	1. Yes 2. No	
7.	What is the main source of water for the house?	1. Piped into residence 2. Commone pipe water 3. Public well/borehole 4. Well/borehole with pump in the compound 5. Rain water 6. Well/borehole without pump in the compound 7. Pond/River/Stream/Dam 8. From spring	

		9. Others specify ----------	
8.	Does the following things availabl at your home?	1. Yes 2. No	If say yes mention the number
	A Raido/tape		
	A Bed/ Cotton/sponge/spring mattress		
	A Mobile phone		
	A water pump		
	A solar energy		
	Others specify ----------		
9.	Does the following animal availabl at your home?	1. Yes 2. No	If say yes mention the number
	Ox/caw		
	Calf		
	Horse/ Mules		
	Donkey		
	Sheep/Goat		
	Hen		
	Beehives		
10.	Do you produced the following crop in the previous production seasone	1=Yes 2=No	If you say yes how much the amount in quintals
	Teff		
	Barley		
	Wheat		
	Maize		
	Sorghum		
	Oats		
	Bean		
	Pea		
	Chickpea		
	Lentil		
	Carrot		
	Onion		
	Garlic		
	Potato		
	Cabbage		
	Tomato		

	Others (specify) ----------		

Thanks for your cooperation!

Name of data collector _____
Signature _____

10.4 Amharic version information sheet and consent form

<u>ምርምር የማድረጊያ ፈቃድ ለመዉሰድ የተዘጋጀ ማብራሪያ</u>

ይህ በሰሜን ምዕራብ ኢትዮጵ በ ጎንደር ዩኒቨርሲቲ ሪፈራል ሆስፒታል ስኳር ያለባቸዉ ተመላላሽ ጎልማሳ ታካሚዎችን ከጤና ጋር በተያያዘ የህይወት ጥራት ደረጃና ተዛማጅ ምክንያቶችን ለማጥናት የሚካሄድ ጥናት ነዉ::

ዋና ተመራማሪ: አንዱ ዓለም ያለው

አድራሻ: በጎንደር የኒቨርሲቲ ሕክምናና ጤና ሳይንስ ኮሌጅ : የሕብረተሰብ ጤና አጠባበቅ ተቋም

ስልክ: 0918151825

ኢ.ሜይል-yalewandualem@gmail.com

የድርጅቱ ስም: ጎንደር ዩንቨርስቲ ህክምና ጤና ሳይንስ ኮሌጅ የህብረተሰብ ጤና አጠባበቅ ተቋም.

ፕሮጀክቱን ወጭ የሚሸፍነው አካል: ጎንደር ዩንቨርስቲ

መግቢያ:

1. ይህ በሰሜን ምዕራብ ኢትዮጵያ በ ጎንደር ዩኒቨርሲቲ ሪፈራል ሆስፒታል ስኳር ያለባቸዉ ተመላላሽ ጎልማሳ ታካሚዎችን ከጤና ጋር በተያያዘ የህይወት ጥራት ደረጃና ተዛማጅ ምክንያቶችን ለማጥናት የሚካሄድ ጥናት ሲሆን በጎንደር የኒቨርሲቲ ሕክምናና ጤና ሳይንስ ኮሌጅ : የሕብረተሰብ ጤና አጠባበቅ ተቋም የሁለተኛ ዲግሪ የመጨረሻ ዓመት ተማሪ በሆነዉ አንዱ አለም ያለው እና በአማካሪዎቹ ዶ/ር መዝገቡ ይታያል እና በ አቶ አማረ ምንይሁን የሚካሄድ ነዉ::

የጥናቱ ዓላማ:

የዚህ ጥናት አላማ በ ጎንደር ዩኒቨርሲቲ ሪፈራል ሆስፒታል ስኳር ያለባቸዉ ተመላላሽ ጎልማሳ ታካሚዎችን ከጤና ጋር በተያያዘ የህይወት ጥራት ደረጃቸውንና ተዛማጅ ምክንያቶችን ለማጥናት የሚካሄድ ጥናት ነዉ:: የጥናቱ ውጠት የትኞቹ ተዛማጅ ጉዳዮች ከጤና ጥራት ጋር ዝምድና እንዳላቸዉ በማየት የጤና ጥራትን ለማሻሻልና ዉሳኔን ለማገዝ ይጠቅማል:: ጥናቱ ከዚህም ባሻገር ለሊሎች ጥናቶች እንደመነሻ በመሆን ያገለግላል::

የጥናቱ አካሄድ:

ይህ ጥናት የሚካሄደዉ ስኳር ያለባቸዉ ተመላላሽ ጎልማሳ ታካሚዎችን ከጤና ጋር በተያያዘ የህይወት ጥራት ደረጃቸውንና ተዛማጅ ምክንያቶቹም ምን ምን እንደሆኑ ለማወቅ እንደመሆኑ መጠን አርስዎም የበኩልዎን አስተዋጽኦ እንዲያደርጉ በትህትና እንጋብዛለን::አላማዉን ተገንዝበዉ ለመሳተፍ ፈቃደኛ ከሆኑ የተዘጋጀዉን የስምምነት ዉል ይፈርሙና የተዘጋጁ ጥያቄዎችን በመመለስ የበኩልዎን አስተዋጽኦ ያድርጉልን::

በጥናቱ የመሳተፍ ጉዳት:

በዚህ ጥናት በመሳተፍዎ ሊጎዱ ወይንም ሊያባክኑ የሚችሉት ነገር ቢኖር ምናልባትም ይህንን መረጃ መስብሰቢያ መጠይቅ በመመለስ የሚያባክኑት ሃያ ደቂቃ ጊዜ ብቻ ነዉ::ይህም ቢሆን ጥናቱ ለወደፊቱ ከሚያስገኘዉ ጠቀሜታ

አንጻር እርስዎ ከሚያጠፉት ጊዜ ይልቅ የጥናቱ ጠቀሜታ የጎላ ነው፡፡ እናም በሚሰጡት መረጃ ያን ያህል ችግር/ጉዳት እንደማይደርስብዎ እንገነዘባለን፡፡

የጥናቱ ጠቀሜታ፡

በዚህ ጥናት በመሳተፍ እርስዎ በቀጥታ ተጠቃሚ ላይሆኑ ይሆናል ነገር ግን የዕርስዎ ተሳትፎ ከጤና ጋር በተያያዘ የህይወት ጥራት ደረጃና ከሱ ጋር ተዛማጅነት ያላቸውን ጉዳዮች ለማወቅ ይጠቅመናል፡፡ ሲቀጥልም ከእርስዎ የምናገኘዉ መረጃ የስኳር ታካሚዎችን ከጤና ጋር በተያያዘ የህይወት ጥራት ደረጃቸውንና ለማሻሻል ዕቅድ ለማቀድ ለመተግበር ይጠቅማ፡፡ ሆኖም በዚህ ጥናት በመሳተፍዎ የሚያገኙት ምንም አይነት ክፍያ የለም፡፡

የመረጃ ሚስጢራዊነት፡

ለዚህ ጥናት ስኬታማነት የሚሰጡት ማንኛዉም መረጃ ሚስጢራዊነቱ የተጠበቀና ስምዎትም የማይጻፍ ከመሆኑም ባሻገር መልስ የሰጡበትም ወረቀት የራሱ ሚስጥራዊ ቁጥር ተሰጥቶትና ተቆልፎ የሚቀመጥ ነዉ፡፡

ያለመሳተፍ መብት፡

በዚህ ጥናት አለመሳተፍ ወይንም በማንኛዉም ጊዜና ሁኔታ ማቋረጥም ሆነ መመለስ ያልፈለጓቸዉን ጥያቄዎች መልስ አለመስጠት ይችላሉ፡፡ለመሳተፍ ፈቃደኛ ባለመሆንዎም ምንም አይነት ተጽእኖ እንደማየደርስብዎት ልናረጋግጥልዎ እንዎዳለን፡፡

ለበለጠ መረጃ፡

1. ከጥናቱ ጋር በተያያዘ ማንኛዉንም ጥያቄ ካለወት ዋና ተመራማሪዉን አንዱ አለም ያለውን በስልክ ቁጥር 0918151825 ወይንም በ ኢ.ሜይል yalewandualem @gmail.com ወይንም አማካሪዉን አማረ ምንይሁን በስልክ ቁጥር 0912290034 ወይንም በ ኢ.ሜይል amarebdr @gmail.com በማንኛዉም ጊዜና ሁኔታ መጠየቅ ይችላሉ፡፡

የስምምነት ቅጽ

ይህ መጠይቅ ስኳር ህመም ላለባቸዉ ተመላላሽ ጎልማሳ ታካሚዎችን ከጤና ጋር በተያያዘ የህይወት ጥራት ደረጃውንና ተዛማጅ ምክንያቶችን ለማጥናት የተዘጋጀ መጠይቅ ነዉ።።

መግቢያ

ሰላም እንደምን አሉ ----------እባላለሁ።። ለ ጎንደር ዩኒቨርሲቲ እየሰራሁ እገኛለሁ እዚህ የመጣሁት ይህንን ጥናት የሚያካሒደዉ የጎንደር ዩኒቨርሲቲ የህብረተሰብ ጤና አጠባበቅ ተቋም ቡድን አባል ሆኜ ነዉ።።የዚህ መጠይቅ ዋና አላማ ከጤና ጋር በተያያ የህይወት ጥራትና ተዛማጅ ጉዳዮች ላይ ከስኳር ህመምተኞች መረጃ ለመሰብሰብ ሲሆን ጥናቱ ለስኳር ህመምተኞች ለወደፊቱ በተሻለ ሁኔታ ለማከምና ከጤና ጋር በተያያዘ የህይወት ጥራት ለማሻሻል ከመጥቀሙ በሻገር እንደመነሻ ጥናት በመሆን ያገለግላል።።ከዚህ በመቀጠል ስኳር ያለባቸዉ ጎልማሳ ታካሚዎችን ከጤና ጋር በተያያዘ የህይወት ጥራት ደረጃውንና ተዛማጅ ምክንያቶችን በተመለከተ የተወሰኑ ጥያቄዎችን ለ 20 ደቂቃዎች ለመጠየቅ እንዲሁም ከብደትዎንና ቁመትዎን ለመለካት እወዳለሁ።። ከእርስዎ የሚገኘዉ መረጃ በምን በምን ተዛማጅ ጉዳዮ ከጤና ጋር በተያያዘ የህይወት ጥራት ደረጃን ለማሻሻል ለማወቅ እገዛ ይኖረዋል።። ከእርስዎ የሚገኘዉ መረጃ ለጥናቱ ትክክለኛነት ከፍተኛ ሚና ስላለው መረጃዎ ትክክለኛ እንዲሆን ስል እጠይቃለሁ።።ከእርስዎ የሚገኘዉ ማንኛዉንም መረጃ በሚስጢር ይያዛል።።ከዚህ ጥናት ጋር በተያያዘ በማንኛዉም ቦታና ጊዜ ስምዎ እንደማይመዘገብና እንደማይጠቀስ ልገልፅልዎ እወዳለሁ።።በጥናቱ የሚሳተፉት የእርስዎ ሙሉ ፈቃደኝነት ሲገኝ ብቻ ነዉ።። በመጠይቁ ላለመሳተፍ ወይም በመጠይቁ ሂደት ሊመልሱት የማይፈልጓቸዉን ጥያቄዎች ያለመመለስ መብትዎ የተጠበቀ ነው።።

በመጠይቁ ለመሳተፍ ፈቃደኛ ነዎት?

1. አዎ ----------መጠይቁ ይቀጥላል
2. አይደለሁም ----------ወደሌላ ታካሚ ሒድ

ይህ መጠይቅ ስኳር ህመም ላለባቸዉ ተመላላሽ ጎልማሳ ታካሚዎችን ከጤና ጋር በተያያዘ የህይወት ጥራት ደረጃውንና ተዛማጅ ምክንያቶችን ለማጥናት የተዘጋጀ መጠይቅ ነዉ::

የካርድ ቁጥር---------- ኮድ----------

	ክፍል 1፡የማህበራዊና ስነ-ህዝብ ጥያቄዎች		
ተ.ቁ	ጥያቄዎች	መልሶች	ምርመራ
1	ጾታ	1.ወንድ 2. ሴት	
2	እድሜ	_____ዓመት	
3	ሃይማኖት	1. ኦርቶዶክስ 4. ካቶሊክ 2. ሙስሊም 5. ሌላ(ይግለጹ) 3. ፕሮቴስታንት	
4	የጋብቻ ሁኔታ	1. ያገባ/ች 4.ያላገባ/ች 2. የፈታ/ች 5. የሞተበት/ባት 3. ተራርቀዉ የሚኖሩ	
5	ስራ	1. ስራ አጥ 6. ነጋዴ 2. ገበሬ 7. የቀን ሠራተኛ 3. ጡረታ የወጣ/ች 8.የቤት እመቤት 4. የግል ተቀጣሪ 9. ሌላ(ይግለጹ)--------- 5. የመንግስ ተቀጣሪ	
6	የመኖሪያ ቦታ	1. ከተማ 2. ገጠር	
7	የትምህርት ደረጃ	1. ማንበብና መፃፍ የማይችል/ትችል 2. ማንበብና መፃፍ ብቻ የሚችል 3. ከ1ኛ-8ኛ ክፍል 4. 9ኛ- 10ክፍል 5. 11ኛ- 12ኛክፍል 6. ኮሌጅ/ዩኒቨርሲቲ 7. ሌላ(ይግለጹ)_____	
8.	ብሄር	1. አማራ 4. ኦሮሞ 2. ቅማንት 5. ሌላ(ይግለጹ) 3. ትግሬ	

ክፍል 2፡ የህክምና ምርመራ ሁኔታዎችን የሚመለከቱ ጥያቄዎች			
1	የስኳር ህመም እንዳለብዎ ካወቁ ምን ያህል ጊዜ ሆነዎት?	----------በወር/በአመት	
2	የሚወስዱት የስኳርመድሐኒት ምንድን ነዉ?	1. በአፍ የሚዋጥ 3. ሁለቱንም 2. መርፌ 4. ምንም አልወስድም	
3	ከስኳር ሌላ በሐኪም የተረጋገጠ ለረጅም ጊዜ/ዓመት የሚቆይ በሽታ አለብዎት?	1. አዎ 2. የለም	
4	ለጥያ ቁጥር 3 መልስዎ አዎ ከሆነ ይግለጹ?	----------	
	ስነ-ልኬታ		
5	ክብደት	----------በ ኪ.ግ	
6	ቁመት	----------በ ሴ.ሜ	
7	ቢ.ኤምአይ	----------	
	ከካርድ የሚወሰድ መረጃ		
8	የስኳር በሽታ አይነት	1. አይነት 1 2. አይነት 2	
9	የዕለቱ ከምግብ በፊት የተለካ በደም ዉስጥ ያለ የስኳር መጠን	----------	

10	ከስኳር ጋር በተያያዘ ሌላ ተጓዳኝ በሽታ አለ ?	1. አዎ (ይጠቀስ)---------- 2. የለም	

ክፍል 3፡ከጤና ጋር በተያያዘ የህይወት ጥራት የሚመለከቱ ጥያቄዎች

የሚከተሉት ጥያቄዎች ስለ እርስዎ ጤና፣ የህይወት ጥራትና በሌሎች መስኮች እንዴት እንደሚስማዎት ይጠይቃል፡፡ እኔ እያንዳንዱን ጥያቄ ከነ አማራጭ መልሱ አነብልዎታለሁ፡፡ እባክዎን የእርስዎን መስፈርት፣ተስፋ፣ ደስታና ሰጋቶች ላይ በማተኮር ባለፉት 4 ሳምንታት ስለህይወትዎ ያሰቡትን ወይም የተገነዘቡትን መሰረት በማድረግ ተገቢ ነው የሚሉትን መልስ ይምረጡ፡፡ ምናልባት ለተጠየቁት ጥያቄዎች የትኛውን መልስ መስጠት እንዳለብዎት እርግጠኛ ካልሆኑ በመጀመሪያ ያሰቡት ምላሽ የተሻለ ይሆናል፡፡

		በጣም አነስተኛ	አነስተኛ	አነስተኛም ጥሩም አይደለም	ጥሩ	በጣም ጥሩ
1.	ከጤናዎ ጋር በተያያዘ የህይወት ጥራት ደረጃዎን ከየትኛ ይፈርጁታል?					
		በጣም አልረካሁም	**አልረካሁም**	**መካከለኛ**	**እረክቻለሁ**	**በጣም እረክቻለሁ**
2	በጤናዎ ምን ያህል ረክተዋል?					
		ምንም	**በጥቂቱ**	**መካከለኛ**	**በጣም**	**እጅግ በጣም**
3	በአካልዎ ህመም ምክንያት ያሰቡትን ስራ ለመስራት ምን ያህል አዳጋች ነው ብለው ያስባሉ?					
4	የዕለት ተዕለት ህይዎትዎ ለመተግበር ምን ያህል ማንኛውም አይነት ህክምና ያስፈልገዎታል?					
5	በህይዎትዎ ምን ያህል እየተዝናኑ ነዉ?					
6	ህይወቴ ምን ያህል ትርጉም አለዉ ብለዉ ያስባሉ?					
7	ለነገሮች ምን ያህል ትኩረት መስጠት ይችላሉ?					
8	በዕለት ኑሮዎ ምን ያህል ደህንነት ይሰማዎታል?					
9	የመኖሪያ አካባቢዎ ምን ያህል ለጤና ምቹ ነው?					
10 4	የእለት ተዕለት ተግባርዎን ለማከናወን በቂ ሃይል አለዎት?					
11	አሁን ያለዎትን አካላዊ አቋም ይቀበሉታል?					
12	መሰረታዊ ፍላጎትዎን ለማሟላት በቂ ገንዘብ አለዎት?					
13	ለዕለት ተዕለት ህይወትዎ የሚያስፈልጎትን መረጃ በቀላሉ ያገኛሉ?					
14	መዝናኛዎችን የማግኘት እድልዎ ምን					

	ያህል ነው?					
		በጣም አነስተኛ	**አነስተኛ**	**አነስተኛም ጥሩም አይደለም**	**ጥሩ**	**በጣም ጥሩ**
15	ምን ያህል ከቦታ ቦታ መንቀሳቀስ ይችላሉ?					
		በጣም አልረካሁም	**አልረካሁም**	**መካከለኛ**	**እረክቻለሁ**	**በጣም እረክቻለሁ**
16	በእንቅልፉዎ ምን ያህል እረክተዋል?					
17	የዕለት ተዕለት ተግባርዎን በማከናወን አቅምዎ ምን ያህል እረክተዋል?					
18	ስራ በመስራት አቅምዎ ምን ያህል እረክተዋል?					
19	በራስዎ ምን ያህል እረክተዋል?					
20	ከሌሎች ሰዎች ጋር ባለዎት ግንኙነት ምን ያህል እረክተዋል?					
21	በወሲብ ህይወትዎ ምን ያህል እረክተዋል?					
22	ከጎደኞችዎ በሚያገኙት ድጋፍ ምን ያህል እረክተዋል?					
23	በመኖሪያ ቦታዎና አካባቢዎ ባሉ ሁኔታዎች ምን ያህል እረክተዋል?					
24	ለጤና አገልግሎት ባለዎት ቅርበት ምን ያህል እረክተዋል?					
25	ባለው የመጓጓዣ አገልግሎት ምን ያህል እረክተዋል?					
		በጭራሽ አልተሰማኝም	**አልፎ አልፎ ይሰማኛል**	**በተደጋጋሚ ይሰማኛል**	**ብዙ ጊዜ ይሰማኛል**	**ሁል ጊዜ ይሰማኛል**
26	ለምን ያህል ጊዜ አሉታዊ ስሜት (ለምሳሌ፡ መከፋት፣ ተስፋ መቁጥረ፣ ፍርሃትና ጭንቀት) ይሰማዎታል?					

ክፍል 4 ከአኗኗር(ስነ-ባህርይ) ጋር የተያያዙ ጥያቄዎች

ከስኳር ህመም ጋር በተያያዘ የሚደረጉ የጥንቃቄና ልማዳዊ ተግባራት

ከዚህ በታች ያሉ ጥያቄወች ባሳለፉት 7 ቀናት ለስኳር ህመምዎ ስላደረጉት የጥንቃቄና ልማዳዊ ተግባራት ይጠይቃል::
ምናልባት ባሳለፉት 7 ቀናት አሞት ከነበር እባክዎን ከህመምዎ በፊት ስለነበረዉ 7ቀናት ይሰቡ::

	አመጋገብ	0	1	2	3	4	5	6	7
1	ባለፉት 7 ቀናት ዉሰጥ ምንያህሉን ቀን ጤናማ የአመጋገብ እቅድዎን ተከትለዋል?								
2	ባሳለፉት ነ ወር በአማካኝ በሳምንት ስንት ቀን አመጋገብ እቅድዎን ተከትለዋል?								
3	ባለፉት 7 ቀናት ዉሰጥ ምንያህሉን ቀን አትክልትና ፍራፍሬ በቀን 3 ጊዜና ከዚያ በላይ ተመግበዋል?								
4	ባለፉት 7 ቀናት ዉሰጥ ምንያህሉን ቀን ስብ የበዛባቸውን ጮማ ስጋ፣ያልተናጠ ወተትና የወተት ምርቶችን ተጠቅመዋል?								
	እንቅስቃሴ								

5	ባለፉት 7 ቀናት ዉስጥ ምንያህሉን ቀን ቢያንስ ያልተቋረጠ 30 ደቂቃ የሚፈጅ የአካል እንቅስቃሴ እርምጃን ጨምሮ ሰርተዋል?								
6	ባለፉት 7 ቀናት ዉስጥ ምንያህሉን ቀን ከቤትና ስራ ቦታ ከሰሩት ተግባር ዉጭ ልዩ በሆነ የአካል እንቅስቃሴ (እንደ ዋና፣ እርምጃና ሳይክል ግልቢያ) የመሳሰሉት እንቅስቃሴ ተሳትፈዋል?								
	የእግር ጥንቃቄ								
7	ባለፉት 7 ቀናት ዉስጥ ምንያህሉን ቀን የእግርዎን ሁኔታ ተመልከተዋል?								
8	ካሳለፉት 7 ቀናት ዉስጥ ምንያህሉን ቀን የጫማዎን ዉስጥ ተመልከተዋል?								
	ሲጋራ ስለማጨስ								
9	ባለፉት 7 ቀናት ዉስጥ ሲጋራ አጭሰዋል?	1.አዎ				2.የለም			

አልኮል መጠጥ

መግለጫ

1 ጠርሙስ ቢራ = 1.7 unit/መለኪያ
1 መለኪያ አረቂ = 1 unit /መለኪያ
1 ጠርሙስ ወይን = 9.0 unit/መለኪያ

1 መለኪያ ዉስኪ = 1 unit /መለኪያ

1 ጣሳ ጠላ = 4.6 unit /መለኪያ
1 ብርጭቆ ወይን ትንሹ (125) 1.5 unit/መለኪያ
1 ብርጭቆ ወይን ትልቁ (175)= 2.2 unit/መለኪያ
1 ብርሌ ጠጅ = 3 unit /መለኪያ
1 ጀንቦ ድራፍት = 1.7 unit /መለኪያ

እባክዎን ከዚህ በታች ላሉት ጥያቄዎች ባለፉት 3 ወራት የእርስዎን የመጠጥ ሁኔታ በደንብ ይገልጻል የሚሉትን መልስ ይስጡ

11	የአልኮል መጠጥ ቀምሰዉ ያዉቃሉ 1. አዎ 2. የለም አዎ ካሉ አዘዉትረዉ የሚጠቀሙት መጠጥ ምንድን ነዉ----------						
		በጭራሽ	ከዎር ያነሰ/ቢያንስ በሁለት ወር አንዴ	በየወሩ	በየሳምንቱ	በየቀኑ	ምርመራ
12	**ለወንድ**፡ለምን ያህል ጊዜ በአንድ አጋጣሚ ስምንትና ከዚያ በላይ መለኪያ ጠጥተዋል? **ለሴት**፡ለምን ያህል ጊዜ በአንድ አጋጣሚ ስድስትና ከዚያ በላይ መለኪያ ጠጥተዋል?	0	1	2	3	4	0,3,4 ካከበቡ ወደ ሌላ ጥያቄ ኼይሂዱ
13	ባለፉት 3 ወራት ዉስጥ በመጠጣትዎ ምክንያት ለምን ያህል ጊዜ በጠጡበ ቀን የነበረዉን ሁኔታ በማግስቱ ለማስታወስ ተቸግረዋል ?	0	1	2	3	4	
14	ባለፉት 3 ወራት ዉስጥ ለምን ያህል ጊዜ በመጠጣትዎ ምክንያት መስራት የሚገባዎትን ስራ ሳይሰሩ ቀርተዋል?	0	1	2	3	4	
15	ቤተሰብ/ጓደኛ ወይም ከጤና ባለሙያ ስለእርስዎ መጠጣት ያሳሰበዉና መጠጣት እንዲያቋርጡ የመከርዎ ነበር?	የለም		አዎ፣ ነገር ግን ባለፈዉ አመት አይደለም		አዎ፣ ባለፈዉ አመት ግዜ	

የመድሐኒት አወሳሰድን የሚመለቱ ጥያቄዎች			
16	አንዳንዴ የስኳር መድሐኒትዎን መዉሰድ ይረሳሉ ?	1. አዎ 2. የለም	
17	ሰዎች አንዳንዴ እረስተዉት ሳይሆን በሌላ ምክንያት መድሐኒት	1. አዎ	

	ሳይዎስዱ ይቀራሉ፡፡እርስዎስ ባለፉት ሁለት ሳምንታት ዉስጥ መድሐኒት ያልዎሰዱበት ቀን አለ?	2. የለም	
18	መድሐኒትዎ አላሻለኝም ብለዉ ለሓኪምዎ ሳይነግሩ መድሐኒትዎን መዉሰድ አቋርጠዉ ያዉቃሉ?	1. አዎ 2. የለም	
19	አንዳንዴ ከቤትዎ ዉጭ በሚያድሩበት ጊዜ ወይም ወደ ሌላ ቦታ በሚሄዱበት ጊዜ መድሐኒትዎን መዉሰድ ይረሳሉ?	1. አዎ 2. የለም	
20	ትናንት ሁሉንም የስኳር መድሐኒትዎን ወስደዋል ?	1. አዎ 2. የለም	
21	አንዳንዴ ህመሙ የተሻለዎት መስሎ ሲሰማዎት መድሐኒትዎን መዉሰድ ያቋርጣሉ?	1. አዎ 2. የለም	
22	አንዳንድ ሰወች መድሐኒት በየቀኑ መዉሰድ ይሰለቻሉ፡፡ እርስዎ መድሐኒት በየቀኑ መዉሰድዎ አስጨንቆዎት/አስመርሮዎት ያዉቃል?	1. አዎ 2. የለም	
23	መድሐኒትዎን ለመዉሰድ ምን ያህል ጊዜ ለማስታወስ ይቸገራሉ?	1. ረስቸ አላዉቅም 2. አንዴ ብቻ 3. አንዳንዴ 4. በአብዛኛዉ 5. ሁሌም	

ክፍል 5፡- የቤተሰብ ገቢና የሃብት ሁኔታን በተመለከተ

ከከተማ ለመጡ የሚሞላ

ክፍል 3 የ ቤተሰብ የሃብት መጠን የሚመለከት ጥያቄ			
1.	የቤቱ ይዞታ የማን ነው?	1. የግል 2. የቀበሌ 3. የከራይ 4.ሌላ----------	
2.	የቤቱ ወለል	1.አፈር/ጠጠር 2. በእበት የተለቀለቀ 3.ሲሚንቶ 4.ሴራሚክ 5. ሌላ------	
3.	የቤቱ ጣራ	1. ቆርቆሮ 2. ሳር/እንጨት 3. ሌላ	
4.	የቤቱ የውጭ ግድግዳ	1. ድንጋይ በጭቃ 2. እንጨት በጭቃ 3. ድንጋይ/ብሎኬት በሲሚንቶ 4. ሌላ----------	
5.	ለምኝታ የሚያገለግል ክፍል ብዛት	በቁጥር--------	
6.	የቤቱ ዋና የምግብ ማብሰያ	1.ኤሌክትሪክ 4. እንጨት 2.ከሰል 5 .ኩበት 3.ጋዝ 6. ሌላ ካለ ይጥቀሱ _____	
7.	የሚጠቀሙት መጸዳጃ ቤት ምን አይነት ነው?	1.የዉሃ መልቀቂያና ማፋሰሻ ያለው የግል መፀዳጃ ቤት 2.የተሻሻለ ሽታ አልባ የጉድጓድ መፀዳጃ ቤት 3. ባህላዊ የጉድጓድ መፀዳጃ ቤት 4. የጋራ መፀዳጃ ቤት 5.ጫካ/ሜዳ ላይ 6.ሌላ ካለ ይጥቀሱ _____	
8.	የምግብ ማብሰያ ቤት አልዎት	1. አዎ 2. የለም	

9.	የሚጠቀሙበት የዉሃ ምንጭ ምንድን ነው?	1. በግቢው ውስጥ ካለ ቧንቧ 2. የጋራ ቧንቧ 3. የጋራ ጉድጋድ 4.ግቢዎ ውስጥ የጉድጓድ ውሃ ከነፓንፑ 5. የተጠራቀመ የዝናብ ውሃ 6. የጉድጓድ ውሃ ፓንፕ የሌለው 7. ኩሬ/ወንዝ/ወራጅውሃ/የተገደበውሃ/ምንጭ 9. ሌላ ካለ ይጥቀሱ _____	
10.	ቤት ዉስጥ ከዚህ በታች የተዘረዘሩት አሉ?		ካሉ ቁጥራቸው ምን ያክል ነው
11.	ሬዲዮ	1. አዎ 2 የለም	
	ቴሌቪዥን	1. አዎ 2. የለም	
	የቤት ስልክ	1. አዎ 2. የለም	
	ፍሪጅ	1. አዎ 2. የለም	
	አልጋ/የጥጥ/ስፖንጅ/ስፕሪንግ ፍራሽ	1. አዎ 2. የለም	
	ጠረንጴዛ	1. አዎ 2. የለም	
	ወንበር	1. አዎ 2. የለም	
12.	ከቤተሰቡ ውስጥ ከሚከተሉት ያለው አለ?		
13.	የእጅ ስልክ	1. አዎ 2. የለም	
	መልስዎ አዎ ከሆነ ምን አይነት ሞባይል ነዉ የያዙ	1. ስማርት/ ተችፎን 2. ሌላ	
	ሞተር ሳይክል	1. አዎ 2. የለም	
	ባጃጅ	1. አዎ 2. የለም	
	ጋሪ	1. አዎ 2. የለም	
	መኪና	1. አዎ 2. የለም	
14.	ቤት ዉስጥ ከዚህ በታች የተዘረዘሩት አሉ?		ካሉ ቁጥራቸው ምን ያክል ነው
	በሬ/ላም	1. አዎ 2. የለም	
	ፈረስ	1. አዎ 2. የለም	
	ፍየል	1. አዎ 2. የለም	
	በግ	1. አዎ 2. የለም	
	ደሮ	1. አዎ 2. የለም	
	የንብ ቀፎ	1. አዎ 2. የለም	
15	ከቤተሰባችሁ መካከል የባንክ/ የቁጠባ ደብተር ያለው አለ?	1. አዎ 2. የለም	

ከገጠር ለመጡ የሚጠየቅ

1	የቤቱ ይዞታ የማን ነው?	1.የግል 2.ሌላ----------	
2.	የቤቱ ጣራ	1. ቆርቆሮ 2. ሳር/እንጨት 3.ሌላ ካለ ይጠቀስ----------	
4	የቤቱ የውጭ ግድግዳ	1. እንጨት በጭቃ	

		2. ድንጋይ በጭቃ 3. ድንጋይ/ብሎኬት በሲሚንቶ 4. ሌላ----------	
5	የቤቱ ዋና የምግብ ማብሰያ	1.ኤሌክትሪክ 4. እንጨት 2.ከሰል 5 .ኩበት 3.ጋዝ 6. ሌላ ካለ ይጥቀሱ _____	
6	የምግብ ማብሰያ ቤት አልዎት	1. አዎ 2. የለም	
7	ለእንስሳቱ መኖሪያ የሚሆን የተለየ ቤት አልዎት?	1. አዎ 2. የለም	
8	የሚጠቀሙበት የዉሃ ምንጭ ምንድን ነው?	1. በግቢው ውስጥ ካለ ቧንቧ 2. የጋራ ቧንቧ 3. የጋራ ጉድጋድ 4.ግቢዎ ውስጥ የጉድጓድ ውሃ ከነፓምፑ 5. የተጠራቀመ የዝናብ ውሃ 6. የጉድጓድ ውሃ ፓምፕ የሌለው 7. ኩሬ/ወንዝ/ወራጅውሃ/የተገደበውሃ 8. ምንጭ 9. ሌላ ካለ ይጥቀሱ _____	
9	ቤት ዉስጥ ከዚህ በታች የተዘረዘሩት አሉ?	1=አዎ 2=የለም	ካሉ ቁጥራቸው ምን ያክል ነው
	ሬድዮ ወይም ቴፕ		
	አልጋ/የጥጥ/ስፖንጅ/ፍራሽ		
	የሞባይል ስልክ		
	የውሃ ጀኔሬተር		
	የሶላር ሐይል		
	ሌላ ከለ ይጠቀስ		
10	ቤት ዉስጥ ከዚህ በታች የተዘረዘሩት እንስሳቶች አሉ?	1=አዎ 2=የለም	ካሉ ቁጥራቸው ምን ያክል ነው
	በሬ/ላም		
	ጥጃ		
	በቅሎ/ ፈረስ		
	አህያ		
	ፍየል/በግ		
	ደሮ		
	የንብ ቀፎ		
11	ከዚህ በታች የተጠቀሱት የእርሻና የጓሮ ምርት ባለፈው ዓመት ማምረትና አምርተዋል	1=አዎ 2=የለም	አዎ ካሉ በኩንታል ምን ያህል አመረቱ
	ጤፍ		
	ገብስ		

	ስንዴ		
	በቆሎ		
	ማሽላ		
	አጃ		
	ባቄላ		
	አተር		
	ሽንብራ		
	ምስር		
	ካሮት		
	ቂይ ሽንኩርት		
	ነጭ ሽንኩርት		
	ድንች		
	ጎመን		
	ቲማቲም		
	ሌሎች ካሉ ይጥቀሱ		

ስለትብብርዎ አመሰግናለሁ!

መረጃዉን የሰበሰበዉ ስም ----------

ፊርማ ----------

10.5: Declaration

I, the undersigned, declare that this thesis is my original work in partial fulfillment of the requirements for the degree of master of public health and has never been presented in this or any other University and that all the source materials used for this thesis have been duly acknowledged;

Name of investigator: Andualem Yalew Signature: _____

Place of submission: Institute of Public Health, College of Medicine and Health Sciences, University of Gondar.

Date of Submission: _____

This thesis has been submitted for examination with our approval as an advisor.

Advisors

Name: Dr. Mezgebu Yitayal (MPH, PHD)

Signature: _____ Date: _____

Name: Amare Minyihun (BSc, MPH)

Signature: _____Date: _____

10.6: Assurance of principal Investigator

The undersigned senior MPH student agrees to accept responsibility for the scientific, ethical and technical conduct of the research thesis and for provision required progress reports as per terms and conditions of the research and publications office of the University of Gondar.

Name of the student: Andualem Yalew

Signature: ----------

Date: June, 2017

Approval of the advisor(s)

Name of advisor(s)	signature	date
1. Dr. Mezgebu Yitayal	----------	----------
2. Amare Minyihun	----------	----------